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EXAMINER	
DILEVSKI, BORCE	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/562,160	MARCE ET AL.	
	Examiner	Art Unit	
	BORCE DILEVSKI	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/23/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-20 have been examined and are pending.

Information Disclosure Statement

2. An initialed and dated copy of applicants IDS form 1449 submitted on 12/23/2005

Claim Objections

3. Claim 18 is objected to because of the following informalities:

Claim 18 sates "Use according to either claim 16, characterized in that..." where the word "either" denotes that claim 18 would be dependent on an option of two or more claims but only one claim to depend on is present. Examiner will interpret this word as a typo and omit it from consideration.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 6 and 11** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. **Claims 6 and 11 state "protocol time management parameters of a protocol stack belonging to a level three layer of the OSI model". This is unclear because applicant does not define any**

protocol time parameters of a protocol stack. Further, layer three functions usually belong to parameters of a protocol stack, it is not clear how parameters of a protocol stack belong to layer three of the OSI model.

5. **Claims 14-20** provide for the use of a device or method set forth in preceding claims, but, since the claims do not set forth any steps involved in the method/process for using the previously claimed device or method, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

   Claims 14-20 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-6, 8-10, 12-15, and 19-20 rejected under 35 U.S.C. 102(e) as being anticipated by US Patent US 7,136,382 B1 to Sharma et al.

As per Claim 1, Sharma et al teaches a method of processing addresses of communication terminals (Tj) of a packet-switched communication network (N) using a connectionless protocol, characterized in that

it consists in integrating into an address of a communication terminal (Tj) information data representing at least one characteristic of a communication interface that connects it to said network (N) (Fig. 2 and Col. 4 Lines 52-58, Unused bits in the address of an IPv6 address are used for quality of service purposes. The quality of service is characteristic of a communication interface that connects to a network.).

As per Claim 2, Sharma et al teaches a method according to claim 1, characterized in that

the destination address field is divided into sub-fields each intended to receive terminal address information or a communication interface characteristic (Fig. 2 and Col 6 Lines 30-44, The IPv6 address is divided into different fields in which one of the fields is used for QOS purposes

(communication interface characteristic)).

AS per Claim 3, Sharma et al teaches a method according to claim 1, characterized in that

each communication interface characteristic is selected from a group comprising at least a maximum transmission unit (MTU) defining the maximum packet size supported by the communication interface and the reliability level of the communication interface (Fig. 2 and Col. 4 Lines 52-58, Being selected from a group only one will be chosen, QOS (reliability level) is integrated into unused bits of an IPv6 address. The quality of service is characteristic of a communication interface.).

As per Claim 4, Sharma et al teaches a method according to claim 1, characterized in that,

in the event of a request to transmit a data packet to a destination communication terminal (T2) designated by an address integrating said information data (Fig. 2 and Col. 4 Lines 52-58, Unused bits in the address of an IPv6 address are used for quality of service purposes.),

said information data representing at least one characteristic of the communication interface of said destination terminal (T2) is determined from said address (Col. 7 Lines 9-15, Upon receiving a data packet the QOS is read from the address of the packet),

after which transmission parameters of the communication terminal (T1) seeking to transmit data packets to the destination communication terminal (T2) are configured as a function of said information data that has been determined (Col. 7 Lines 15-29, After the QOS information is read from the destination address of the packet, it is routed based on the QOS information obtained).

As per claim 5, Sharma et al teaches a method according to claim 4, characterized in that

said determination is effected in each communication terminal (T1) of said network (N) responsible for transmitting said packet (Fig. 3 and Col. 7 Lines 7-9, The router where QOS information is obtained from the destination address of a data packet and then forwarded based on that information is found at all intermediary nodes of the network).

As per claim 6, Sharma et al teaches a method according to claim 5, characterized in that

said address includes information data representing the reliability level of the communication interface of the destination terminal (T2) and protocol time management parameters of a protocol stack belonging to a level three layer of the OSI model are configured in said communication terminal (T1) having to transmit said data packet as a function of the

reliability level contained in the destination address of said packet to be transmitted (Col. 1 Lines 43-45, Col. 4 Lines 52-58, and Col. 7 Lines 7-29, A packet has QOS information in it's IPv6 (layer 3 of OSI model) destination address in which QOS properties including delay (protocol time management parameters) are taken into account at every router that packet goes through and is routed based on obtained QOS information.).

As per Claim 8, Sharma et al teaches an address processing device (D) for a communication terminal (Tj) of a packet-switched communication network (N) using a connectionless protocol, characterized in that

it comprises processing means (MT) adapted, in the presence of an address of a communication terminal (T2) of the network (N) that is the destination of a data packet to be transmitted containing information data representing at least one characteristic of its communication interface, to determine said information data and then to adapt the communication parameters of the communication terminal (T1) that they equip (Col. 7 Lines 7-49, When a packet is received by a router, the QOS information is obtained from the packets destination address and then the packet is properly put into the routers QOS queue (adapt communication parameters) that it belongs in for routing purposes) **and**

which is seeking to transmit data to said destination terminal (T2) as a function of said information data that has been determined (Col. 7 Lines 7-

49, The router routes the packet based on the QOS information obtained from the destination address of the packet.).

As per Claim 9, Sharma et al teaches a device according to claim 8, characterized in that

each communication interface characteristic is selected from a group comprising at least a maximum transmission unit (MTU) defining the maximum packet size supported by the communication interface and the reliability level of the communication interface (Fig. 2 and Col. 4 Lines 52-58, Being selected from a group only one will be chosen, QOS (reliability level) is integrated into unused bits of an IPv6 address. The quality of service is characteristic of a communication interface.).

As per claim 10, Sharma et al teaches a device according to claim 9, characterized in that

said processing means (MT) are adapted to determine in said address information data representing the reliability level of the communication interface and to configure protocol time management parameters of a protocol stack belonging to a level three layer of the OSI model in said communication terminal (T1) having to transmit said data packet as a function of the reliability level contained in said address of said packet to be transmitted (Col. 1 Lines 43-45, Col. 4 Lines 52-58, and Col. 7 Lines 7-29, A

packet has QOS information in it's IPv6 (layer 3 of OSI model) destination address in which QOS properties including delay (protocol time management parameters) are taken into account at every router that packet goes through and is routed based on obtained QOS information.).

As per claim 12, Sharma et al teaches a device according to claim 8, characterized in that

it is connected to a memory (M) installed in said communication terminal (T1) having to transmit said data packet (Fig. 4 and Col. 7 Lines 9-18, A router has a lookup table that has to be stored on some kind of memory) **and**

in which configuration data of the communication parameters of said communication terminal (T1) is stored in corresponding relationship to said addresses of destination communication terminals (T2) (Fig. 5 and Col. 7 Lines 9-18, The lookup table stored in the router has QOS parameters in which it routes the packet based on the QOS parameters it obtains from the packets destination address) **and**

said processing means (MT) extract from said memory (M) the configuration data stored in corresponding relationship to the address of the communication terminal (T2) that is the destination of said data packet to be transmitted so as to configure the communication parameters of said communication terminal (T1) accordingly (Col. 7 Lines 7-29, The router routes

a packet based comparing the QOS information in the destination address of the packet and the lookup table stored in the router. The packet is passed onto different QOS queues (configure communication parameters) based on which QOS value is obtained from the destination address of the packet.) .

As per claim 13, Sharma et al teaches a communication terminal (Tj) for a packet-switched communication network (N) using a connectionless protocol, characterized in that

it comprises a processing device (D) according to claim 8 (Fig. 4 and Col. 7 Lines 58-63, The router includes a processor to perform reading and writing functions).

As per Claim 14, Sharma et al teaches the use of the processing method according to claim 1 in Internet protocol (IP) communication networks (Col. 4 Lines 50-58, The integration of bits into the IPv6 address of a packet is used on an IP network).

As per Claim 15, Sharma et al teaches the use according to claim 14, characterized in that the

Internet protocol communication network is of the IPv6 type (Col. 4 Lines 50-58, The integration of bits into the destination address of a packet uses

IPv6).

As per Claim 19, Sharma et al teaches the use of the device according to claim 8 in Internet protocol (IP) communication networks (Col. 4 Lines 50-58, The integration of bits into the IPv6 address of a packet is used on an IP network).

As per claim 20, Sharma et al teaches the use of the terminal according to claim 13 in Internet protocol (IP) communication networks (Col. 4 Lines 50-58, The integration of bits into the IPv6 address of a packet is used on an IP network).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claims 7 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma et al further in view of US Patent Application Publication US 2003/0185208 A1 to Lee et al.

As per claim 7, Sharma et al teaches a method according to claim 5, and states a destination address including the use of some of the unused addressing bits for incorporating QOS information (Sharma et al, Col. 4 Lines 50-58) **and routing a packet based on the QOS information obtained from destination address of the packet** (Sharma et al, Col. 7 Lines 10-29)**.**

Sharma et al does not teach characterized in that said address includes information data representing the maximum transmission unit supported by the communication interface and the size of said packet to be transmitted is adjusted in said communication terminal (T1) having to transmit said data packet as a function of the maximum transmission unit (MTU) contained in the destination address of said packet to be transmitted. However, Lee et al states the current method for a source node sending a packet with an MTU value using IPv6 is flawed in that the MTU of the destination or the intermediate nodes is not known so a source node must keep resending a packet until an MTU value is found that will make the packet reach it's destination (Lee et al, Par. 0006 – Par.00007)**. This**

obviates a need for a way for a source node to know the MTU of the destination terminal of the packet that it's sending. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the technique of incorporating unused addressing bits in a packets destination address for non addressing purposes and routing the packets based on the obtained address information of Sharma et al with an MTU value in the address field where packets were routed based on this value because it is a well known problem in the art that the current method as stated by Lee et al utilizes an unnecessary amount of network resources.

As per Claim 11, Sharma et al teaches a device according to claim 9, and states a destination address including the use of some of the unused addressing bits for incorporating QOS information (Sharma et al, Col. 4 Lines 50-58) **and routing a packet based on the QOS information obtained from destination address of the packet** (Sharma et al, Col. 7 Lines 10-29)**.**

Sharma et al does not teach characterized in that said processing means (MT), firstly, determine in said address information data representing the maximum transmission unit (MTU) supported by the communication interface and, secondly, adjust the size of said data packet to be transmitted as a function of the maximum transmission unit (MTU) contained in its header. However, Lee et al states the current method for a source node sending a packet with an MTU value using IPv6 is flawed in

that the MTU of the destination or the intermediate nodes is not known so a source node must keep resending a packet until an MTU value is found that will make the packet reach it's destination (Lee et al, Par. 0006 – Par.00007)**. This obviates a need for a way for a source node to know the MTU of the destination terminal of the packet that it's sending. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the technique of incorporating unused addressing bits in a packets destination address for non addressing purposes and routing the packets based on the obtained address information of Sharma et al with an MTU value in the address field where packets were routed based on this value because it is a well known problem in the art that the current method as stated by Lee et al utilizes an unnecessary amount of network resources.**

8. **Claims 16 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma et al.

As per claim 16, Sharma et al teaches the use according to claim 15, and states that 16 addressing bits are not used for addressing where 4 bits are used for QOS information (Col. 5 Lines 5-9 and Col. 6 Lines 3-6) **but does not teach characterized in that 16 bits of the address are intended to incorporate said information data.**

It is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on Applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Sharma et al discloses using 4 addressing bits out of 16 addressing bits available, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any number of the address bits, including all 16 addressing bits, absent a showing of criticality by Applicant.

As per claim 18, Sharma et al teaches the use according to either claim 16, and states that 4 addressing bits are used for incorporating QOS information into a destination address (Col. 6 Lines 3-6) **but does not teach characterized in that six bits of the address are intended to incorporate information data representing the reliability level.**

It is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any

system absent a showing of criticality in a particular recited value. The burden of showing criticality is on Applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Sharma et al discloses using 4 addressing bits to incorporate QOS information into a destination address, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any number of the address bits, including the use of 6 addressing bits, absent a showing of criticality by Applicant.

9. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma et al further in view of Lee et al.

As per claim 17, Sharma et al teaches the use according to claim 16, and also states that some unused addressing bits are used for incorporating signaling information into a destination address (Col. 6 Lines 3-6) **and routing a packet based on the QOS information obtained from destination address of the packet** (Sharma et al, Col. 7 Lines 10-29).

Sharma does not teach information address bits intended to incorporate information data representing the maximum transmission unit (MTU). However, Lee et al states the current method for a source node sending a packet with an MTU value using IPv6 is flawed in that the MTU of the destination or the intermediate nodes is not known so a source node must keep resending a packet until an MTU value is found that will make the packet reach it's destination (Lee et al, Par. 0006 – Par.00007)**. This obviates a need for a way for a source node to know the MTU of the destination terminal of the packet that it's sending. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the technique of incorporating unused addressing bits in a packets destination address for non addressing purposes of Sharma et al with an MTU value in the address field because it is a well known problem in the art that the current method as stated by Lee et al utilizes an unnecessary amount of network resources.**

The combination of Sharma et al and Lee et al do not teach characterized in that 10 bits of the address are intended to incorporate information data. It is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on Applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v.

U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Sharma et al discloses using some addressing bits to incorporate signaling information into a destination address, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any number of the addressing bits, including the use of 10 addressing bits, absent a showing of criticality by Applicant.

Conclusion

10. Prior arts made of record, not relied upon.

US 7,403,520 B2 to Tsuchiya et al discloses multicast routing method and apparatus for routing multicast packet

US 6,944,169 B1 to Yoshizawa et al discloses a method and apparatus for managing quality of service in network devices

US 2003/0196081 A1 to Savarda et al discloses methods, systems, and computer program products for processing a packet-object using multiple pipelined processing modules

US 7,471,681 B2 to Jason et al discloses determining network path transmission unit

US 6,687,247 B1 to Wilford et al discloses an architecture for high speed class of service enabled linecard

US 7,369,556 B1 to Rekhter et al discloses Router for virtual private network employing tag switching

US 2004/0218550 A1 to Kim discloses a system and method for discovering path MTU in ad hoc network

US 7,317,692 B2 to Jason et al discloses network path discovery

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BORCE DILEVSKI whose telephone number is (571)270-7154. The examiner can normally be reached on M-F 7:30AM - 5:00PM or Flexible.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Ryman can be reached on (571)272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BD

/Daniel J. Ryman/
Supervisory Patent Examiner, Art Unit 2419